

## Scientific Note

### NEW DISTRIBUTION RECORDS FOR THE ELDERBERRY LONGHORN BEETLE *DESMOCERUS CALIFORNICUS* HORN (COLEOPTERA: CERAMBYCIDAE)

*Desmocerus californicus* Horn is a large (12.3 to 27.2 mm length), black and red cerambycid beetle which occurs only in California. The beetle's obligate host and food plant is elderberry (*Sambucus* spp., Caprifoliaceae) bushes which in California are widely distributed and range from near sea-level to 3048 m in elevation. The beetle larvae bore the bushes' living stem pith and adults consume the leaves and flowers. Adults emerge from living stems during spring or summer, leaving diagnostic oval-shaped holes in the bark (Linsley, E. G. & J. A. Chemsak. 1972. Univ. Calif. Publ. Entomol. 69; U.S. Fish and Wildlife Service (USFWS). 1984. Portland, Oregon; USFWS. 1991. Sacramento, California).

Two subspecies of *D. californicus* are described: *D. c. californicus* Horn (California Elderberry Longhorn Beetle [CELB]) and *D. c. dimorphus* Fisher (Valley Elderberry Longhorn Beetle [VELB]). Prior to 1972, the VELB was considered a different and valid species. The subspecies are differentiated by male characters of elytra color, body length, and antennal hair color. Females of the two subspecies are alike (Linsley & Chemsak 1972).

In 1980, the VELB was listed as a threatened subspecies (i.e., likely to become endangered and possibly extinct in the future) by the USFWS (1980. Federal Register 45: 52803–52807). Within the VELB's range, surveys for beetles and elderberry bushes are required for development projects. Also, the destruction of any elderberry bush mandates extensive mitigation to avoid U.S. Endangered Species Act (1973) violations and possible law enforcement and judicial actions.

When listed as threatened, the VELB was known from the Sacramento Valley (i.e., Sacramento and Davis) and the upper San Joaquin Valley (i.e., one site on the Merced River). The nonthreatened CELB was known from numerous sites in coastal California from Mendocino County south to Los Angeles and Riverside counties (Linsley & Chemsak 1972). During the 1980s and 1990s, the collection of specimens and records of emergence hole sightings improved our knowledge of the beetle's distribution (USFWS 1984, 1991); however, that data and new information is unpublished and not readily available.

To clarify the range of *D. californicus*, 46 new locality records (29 from adult beetles and 17 from emergence holes) obtained from field, literature, and museum surveys are presented (Fig. 1). These data show that the species is widely distributed in California, and is significant in extending the known range of *D. californicus* northward into Trinity County; into the southern San Joaquin Valley, the Sierra Nevada foothills, and Mojave Desert mountain ranges; and southward to San Diego. These are the first published records of *D. californicus* in Fresno, Kern, Madera, Mariposa, San Diego, San Joaquin, Sutter, Tehama, Trinity, and Tulare counties. Additional locality records are presented for Merced, Riverside, San Bernardino, and Santa Clara counties.

Subspecific names are not assigned to the new locales because the subspecies taxonomy is problematic. The differentiating characters for the subspecies intergrade and overlap (USFWS 1984, 1991; Authors, personal observations). The new record males from the Merced River (only one of two) and one from the Mokelumne River resemble Linsley & Chemsak's (1972) description of VELB. The other new record males (in the San Joaquin Valley, Coast Range, Sierra Nevada foothills, and remainder of state) resemble the description of CELB, the nonthreatened subspecies. Regardless, the USFWS currently considers the Central Valley and surrounding foothills (below 914

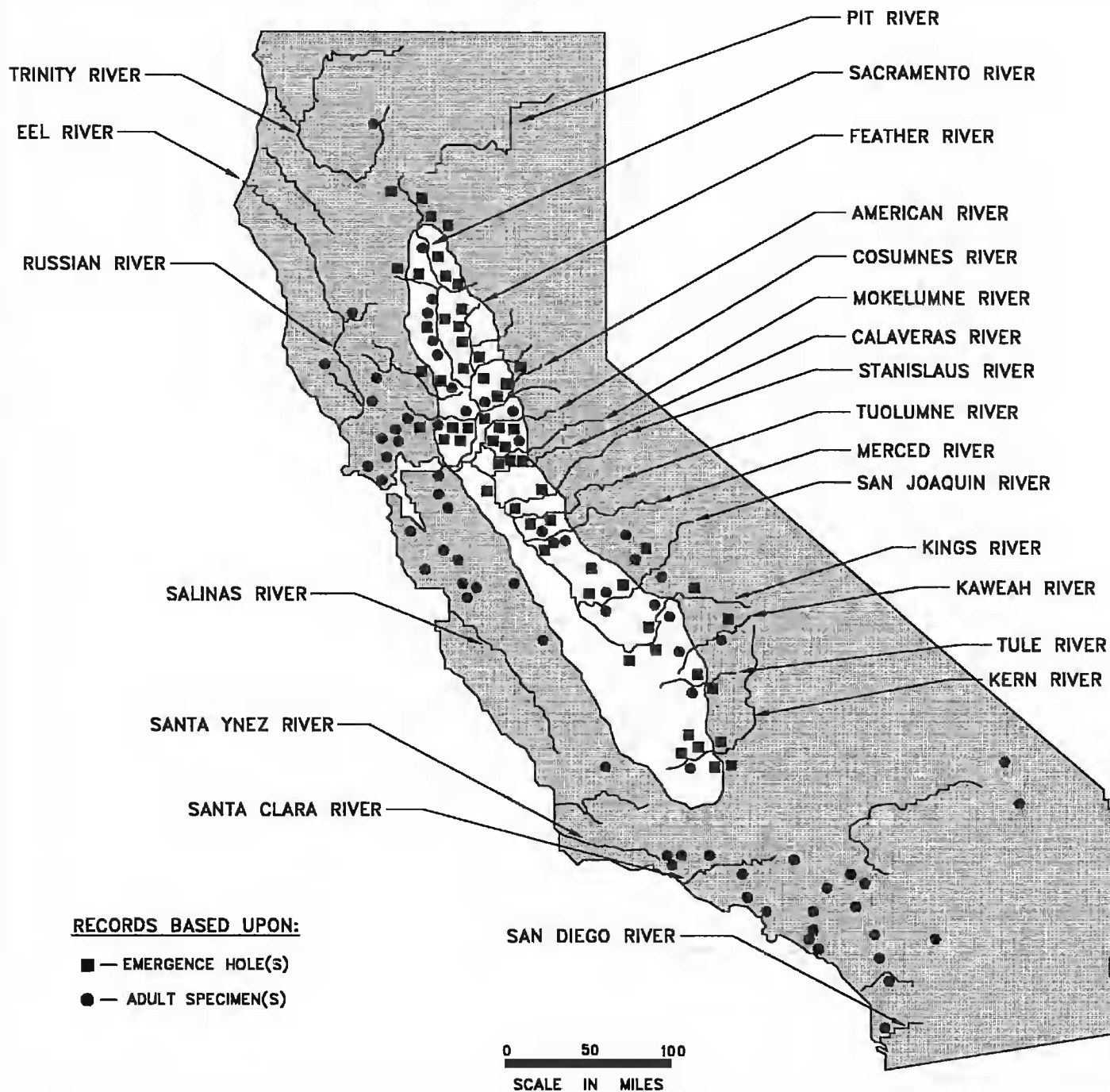


Figure 1. Updated distribution of the elderberry longhorn beetle *Desmocerus californicus* Horn (Coleoptera: Cerambycidae). A symbol may represent several nearby locales. Locales of U.S. Fish and Wildlife Service (1991) are mapped but not presented as new records in the text. The clear area of California denotes its Central Valley.

m elevation) from Redding south through Kern County as the threatened subspecies' range (USFWS. 1996. Sacramento, California).

New distributional records based upon adult beetles include: USA. CALIFORNIA. *FRESNO Co.*: Kings Riv near Hwy 180, 119 m (390 ft), 13 Apr 1989, J. A. Halstead & J. A. Oldham, 1 male, 2 females (CAS—Calif. Acad. of Sciences, San Francisco); W Fork of Byrd Slough near Hwy 180, 117 m (385 ft), 12 Apr 1989, J. A. Halstead & J. A. Oldham, 1 female (CAS); Kings Riv near Annadale Ave, 107 m (350 ft), 18 Apr 1989, J. A. Oldham, J. R. Single & J. A. Halstead, 2 females examined and released; Herndon, 7 May 1970, L. H. Walker, 1 male (Calif. State Univ., Fresno); Table Mtn about 3.1 mi N of Marshall Station, 366 m (1200 ft), 28 Apr 1995, D. York (personal communication). *KERN Co.*: No locale, H. K. Morrison, 1 male, 1 female (NMNH—Natl. Mus., Nat. Hist., Wash., D.C.). *MADERA Co.*: Coarsegold, 671 m (2200 ft), 4 Jun 1989, R. M. Sadeghi & J. A. Halstead, 1 male (CAS); Hwy 41 about 8 mi S of Coarsegold, 375 m (1230 ft), 9 Jun 1991, J. A. Oldham & J. A. Halstead, 1 female (CAS); San Joaquin Riv at Hwy 41, 84 m (275 ft), 1986, D. Mitchell (personal communication), 1 female examined and released. *MARIPOSA Co.*: Mariposa, Jun 1974, 1 male (Acad. Nat. Sciences of Phil., Pennsylvania). *MERCED Co.*: Merced Riv at Rd J7, 37 m (120 ft), 4 & 13 Apr 1990, J. A. Halstead & J. A. Oldham, 2 males (CAS); Los Banos Crk, Los Banos Val, 6 mi SE of San Luis Reservoir, 122 m (400 ft), 11 Apr, 5 May 1987, D. Giuliani, 1 male, 1 female (CDFA—Calif. Dept. of Food & Agric., Sacramento). *RIVERSIDE Co.*: 9 mi E of Temecula, 366 m (1200 ft),

27 May 1969, R. R. Snelling, 2 males (LACM—Los Angeles Co. Mus., California); Menifee Val, 31 May 1976, S. I. & S. L. Frommer (Univ. of Calif., Riverside); SW of Anza, 25 Jun 1949, Simonds, 2 males (CDFA). *SAN BERNARDINO Co.*: Cedar Cyn, 1554 m (5100 ft), 1 Apr 1981, T. Griswold, 1 female (USU—Utah State Univ., Logan); Mitchells Cavern State Park, 24 Mar 1980, T. Griswold, 1 male (USU). *SAN DIEGO Co.*: Pala, May 1962, M. E. P., 1 male (LACM); Mission Val, 15 May 1931, 1 male, 1 female (SDNHM—San Diego Nat. Hist. Mus., California). *SAN JOAQUIN Co.*: Mokelumne Riv, Clements Glen View Cem, 41 m (135 ft), 15 May 1991, C. Barr, 1 male, 1 female (LACM). *SANTA CLARA Co.*: Coyote Crk, 10 Aug 1974, M. Robey, 1 male (TCACO—Tulare County Agric. Comm. Office, Visalia, California); Uvas Mdws, 25 May 1969, W. F. & B. C. Tyson, 1 female (W. Tyson, personal collection, Oakhurst, California); Mount Madonna, 7 Apr 1972, H. J. Denk, 1 male (SDNHM); Silver Creek, 16 Apr 1940, G. S. Mansfield (CAS). *TRINITY Co.*: No locale, 14 May 1925, E. R. Leech, 1 male (NMNH). *TULARE Co.*: Kaweah, 13 Jun 1937, F. T. Scott, 1 male (TCACO); Kaweah Power Sta #3, Sequoia Natl Park, Ash Mtn Park Hdqtrs, 671 m (2200 ft), 22 May 1982, 19 Jun 1983, 9 May 1986, 1 male, 2 females (TCACO); Campbell-Moreland Ditch (trib of Tule Riv) at A.T. & S.F. Railroad between Worth Ave & Hwy 190, 149 m (490 ft), 21 Apr 1991, C. Barr, 1 female (LACM); Lane Slough (trib of Kaweah Riv), Rd 196 & Hwy J27, 123 m (405 ft), 30 Apr 1991, C. Barr, 1 male (LACM).

New distributional records based upon emergence hole sightings include: U.S.A. CALIFORNIA. *FRESNO Co.*: Reedley, Kings Riv Col, 104 m (341 ft), 1993, W. M. Rhodehamel (personal communication); Channel Rd about 3 mi SE of Sanger, 104 m (340 ft), 1990, J. A. Oldham; 1 mi W of Piedra, Hughs Crk, 168 m (550 ft), 1990, J. A. Oldham & J. A. Halstead; Hwy 180 at Alta Main Canal, 122 m (400 ft), 1990, J. A. Oldham & J. A. Halstead; San Joaquin Riv at Riverside Golf Course, 91 m (300 ft), 1989, M. Boland, J. A. Oldham & J. A. Halstead; Hwy 168 about 5 mi NE of Prather, Sierra Natl For, T10S, R23E, Sec 15, 732 m (2400 ft), 1994, D. York (personal communication); Trimmer Sprgs Rd near Secata Crk, N of Pine Flat Reservoir, Sierra Natl For, 640 m (2100 ft), 1995, J. A. & P. S. Halstead. *MADERA Co.*: Oakhurst, 884 m (2900 ft), 1991, J. A. Oldham & J. A. Halstead; Fresno Riv about 3 mi W of Oakhurst, 732 m (2400 ft), 1991, J. A. Oldham & J. A. Halstead; Quartz Mtn Rd about 5 mi SE of Coarsegold, 683 m (2240 ft), 1993, J. A. & P. S. Halstead; Chowchilla Riv at Rd 19, 82 m (270 ft), 1993, J. A. Halstead & J. C. Stebbins. *MERCED Co.*: Livingston, Merced Riv at Hwy 99 (Calif. Nat. Diversity Data Base, 1992, Calif. Dept. of Fish & Game, Sacramento (CNDDDB)). *SUTTER Co.*: Feather Riv near Live Oak (CNDDDB 1992). *TEHAMA Co.*: Jellys Ferry Rd about 15 mi N of Red Bluff, near Sacramento Riv, 122 m (400 ft), 1989, J. A. Oldham & J. A. Halstead. *TULARE Co.*: Tule Riv Indian Reserv, 305 m (1000 ft), 1993, J. A. Halstead; Sequoia Natl Park, Potwisha Cmpgd, 549 m (1800 ft), 1993, R. D. Haines; 1994, P. S. & J. A. Halstead; 1.5 mi N of Lemoncove, Kaweah Riv at Hwy 216, 152 m (500 ft), 1997, Alice Karl, P. S. & J. A. Halstead.

The types of both subspecies and 428 specimens of *D. californicus* were examined from the following locations (excluding the new record locales): U.S.A. CALIFORNIA. *ALAMEDA Co.*: Leona Heights (Park); Mission San Jose; Oakland. *BUTTE Co.*: Ordbend. *COLUSA Co.*: Grimes; Colusa. *CONTRA COSTA Co.*: Martinez. *GLENN Co.*: Butte City. *LAKE Co.*: Adams Sprg (Adams); Gravelly Val, Hullville. *LOS ANGELES Co.*: Chatsworth; Eagle Rock; Los Angeles; Pasadena; Santa Monica; La Brea. *MARIN Co.*: Lagunitas; Marin City; Novata; no locale. *MENDOCINO Co.*: Yorkville; no locale. *NAPA Co.*: Chiles Val. *ORANGE Co.*: Atwood; Fullerton; Huntington Beach; Laguna Beach; Newport Bay; Newport Beach; Newport, Back Bay; Long Beach. *RIVERSIDE Co.*: Riverside; Sonoran Region; no locale. *SACRAMENTO Co.*: Sacramento; Cosumnes Riv near Sloughhouse. *SAN BENITO Co.*: SW of Idria (New Idria). *SAN BERNARDINO Co.*: Lytle Crk; San Bernardino, Upland. *SAN LUIS OBISPO Co.*: no locale. *SANTA BARBARA Co.*: San Roque Crk, Coastal Slope; Montecito; Santa Barbara. *SANTA CLARA Co.*: San Jose; Stanford Univ. *SOLANO Co.*: Cold Crk near Monticello Dam; G. L. Stebbins Cold Cyn Reserv. *SANTA CRUZ Co.*: Ben Lomond. *SONOMA Co.*: Eldridge; Healdsburg; Petaluma; Sonoma. *TEHAMA Co.*: Red Bluff. *VENTURA Co.*: Ojai. *YOLO Co.*: Davis; Knights Landing.

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